

ABSTRACT

TITLE:

A prospective randomized controlled study comparing anaesthetic efficacy of intrathecal isobaric 0.5% levobupivacaine with intrathecal isobaric 0.75% ropivacaine for lower abdominal and lower limb orthopaedic surgeries.

INTRODUCTION:

Ropivacaine and levobupivacaine are the recent local anesthetic drugs that have significantly lower cardiotoxicity compared to bupivacaine. We aimed to compare the anaesthetic efficacy of these drugs via intrathecal route.

METHODS:

60 patients planned for lower abdominal and lower limb orthopaedic surgeries were included in this randomized controlled study. They were divided into two groups to receive either 22.5mg of 0.75%ropivacaine or 15mg of 0.5%levobupivacaine intrathecally. Time of onset of sensory and motor block as well as of maximum sensory and motor blocks, duration of the blocks, hemodynamic parameters and adverse effects were assessed. Results were analysed statistically.

RESULTS:

The sensory block at level of T10 occurred earlier with levobupivacaine compared to ropivacaine.($p=0.009$). Also, the maximum sensory block was attained much faster in levobupivacaine group compared to ropivacaine group.($p=0.036$).The mean time of onset of sensory block at T10 and maximal sensory block were 6.8 ± 4.715 and 10.43 ± 4.854 minutes in ropivacaine group and 4.1 ± 2.636 and 7.9 ± 4.245 minutes in levobupivacaine group respectively. Hemodynamic parameters, adverse effects, duration of sensory and motor blocks and onset of motor block were comparable in the two groups.

CONCLUSION:

The present study concludes that both intrathecal isobaric 0.75% ropivacaine and 0.5% levobupivacaine possess similar block characteristics except difference in their onset time for sensory block which was significantly shorter with levobupivacaine compared to ropivacaine. Further, both the drugs produce similar hemodynamic effects with very less adverse effects.

KEYWORDS: Ropivacaine, levobupivacaine, isobaric, intrathecal local, efficacy.